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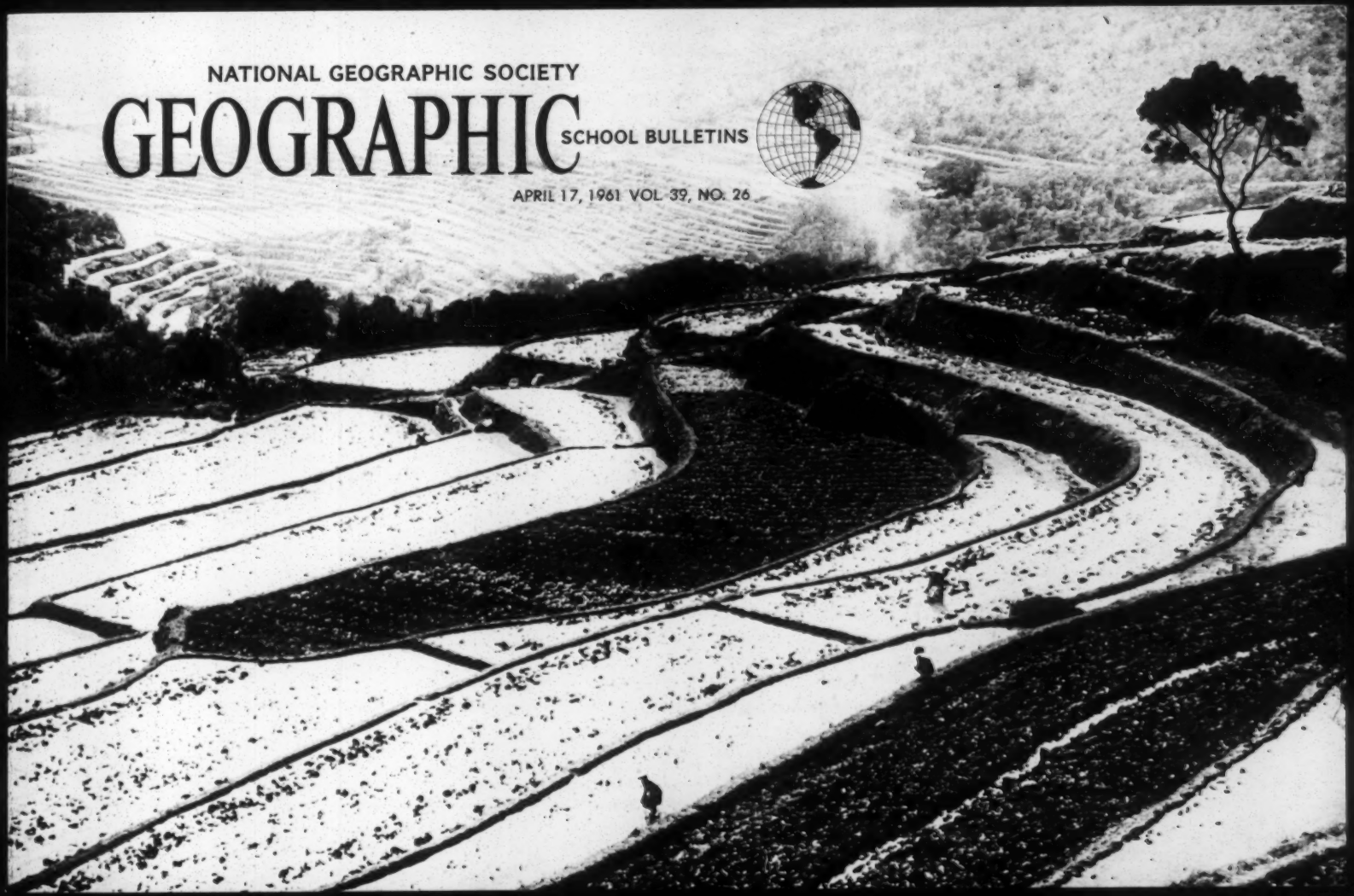

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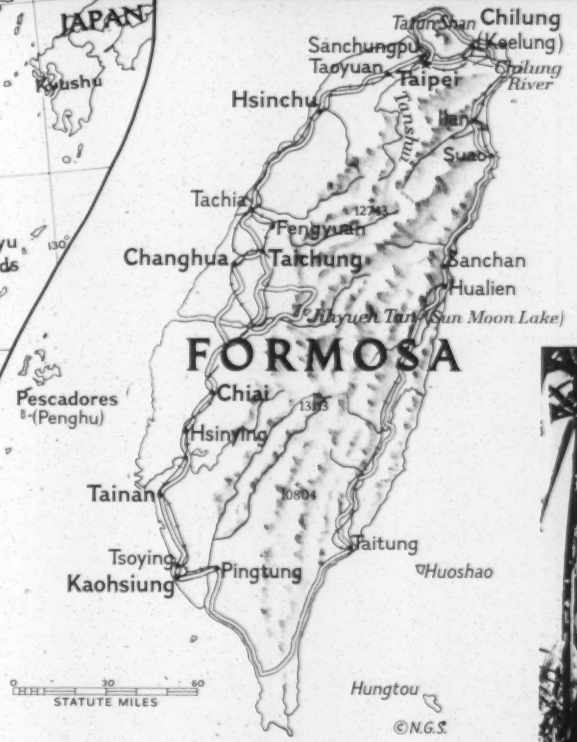

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Sugar harvest—Formosan cutter carefully slices off towering cane stalks. Sugar accounts for half of Formosa's exports. Most goes to Japan and Hong Kong.

About 240 miles long and at most 85 miles wide, the island is separated from Red China by the Formosa Strait. Also in its jurisdiction are the Penghu Islands (Pescadores), an archipelago about 30 miles off its west coast, and the little islands of Quemoy and Matsu, immediately off the mainland of China.

Formosa confronts Asia with a western plain running the entire length of the island. Its

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PHOTOGRAPHS BY HORACE BRISTOL

FORMOSA . . . Refuge of the Free Chinese

UNDER A BANNER advertising the latest offering of the New China Motion Picture Company, midmorning shoppers stop to examine baskets of vegetables in Taipei, capital of Formosa.

On this leaf-shaped island, just a little bigger than Maryland, crowds are the rule. More than 10 million people live there. Its average of 750 persons per square mile makes Formosa one of the most crowded places on Earth.

The Chinese call it *Taiwan*—"Bay of Terraces." Early Portuguese explorers named it *Ilha Formosa*—"Beautiful Island." It is indeed beautiful, with high mountains mantled in green wearing hats of cloud. Flooded rice fields shimmer in the sun. Silvery rivers snake toward the sea. Lush tropical gardens bloom in the south.

But beauty is not what attracted the hordes to its shores. Before the Communists took over the mainland of China, some 150,000 aborigines lived in the Formosan hills, and some six million Taiwanese—themselves descendants of 17th-century land-hungry immigrants from Southern China—filled the Formosan lowlands. Then in 1949, with four of their mainland capitals fallen to the Communists, the Chinese Nationalists—some two million of them—moved lock, stock, and barrel to Formosa to raise an island fortress and outpost of Free China less than 100 miles from the mainland. One of its defenders, right, cleans an F-84 jet fighter supplied by the United States.

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tilapia. Men from villages among the northern and eastern hills brave rough Pacific waters to net sardines and other small fishes. At left, villagers spread the day's catch on bamboo mats to dry.

New ideas and techniques are raising Formosa's living standard. A forest of factory chimneys smokes around Taipei where products from buttons to jeeps are made. The textile mill, below left, spins and weaves cloth which until recently had to be imported from Japan. Bicycles, fertilizer, plywood, drugs, paper, gasoline, and aluminum are manufactured.

Formosans have their own new frontier: the undeveloped eastern region. A new cross-island highway, hacked through the mountains, links it with the west. Other new roads connect eastern towns. Power stations, factories, and modern ports are invigorating this sparsely populated area, bringing industrial bustle to a once-quiet region.

But cultural traditions stay constant. Few Chinese there are who can't sing at least a few bars of a Chinese opera. This ancient art form thrives today on Formosa. At right an operatic princess accents her eyebrows before a performance. Glass balls adorn her headdress.

Nor can the new machines break the continuity of the ancient Chinese faiths. People on Formosa still follow the paths of Buddhism and Taoism and rear their children with the wisdom of Confucius on their lips. L.B.

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PHOTOGRAPHS BY HORACE BRISTOL

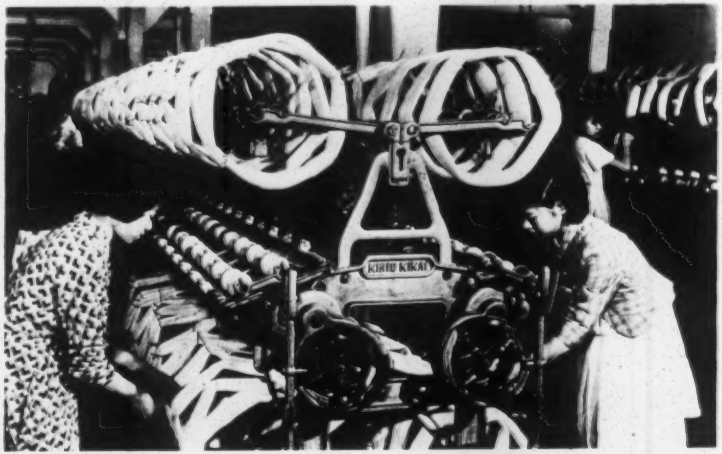
back is turned to the Pacific, where gray cliffs rise precipitously toward peaks that soar more than 10,000 feet.

Although only about one-fourth of the island can be cultivated, Formosans manage to grow most of their own food and even have enough sugar, rice, and tea left over for export.

Every square inch that will take the plow is put to it. Looking like a gigantic amphitheater, the terraced slopes of Tatun Shan (on the cover) glitter with flooded rice paddies. The dark center strip holds loose-leaved Chinese cabbage. In some fields sugar cane may be interplanted with sweet potatoes. Formosans even grow garden crops between railroad tracks. In certain districts, three, sometimes four crops a year are harvested.

Formosans blend old ways with new: the carrying pole and the truck for transport; the fiber hat and plastic raincoat in the fields, Western dress at home; ammonium sulfate and human waste for fertilizer; modern dams to store irrigation water, the foot pump to pull it through bamboo pipes into the field. Standard power for the plow is still the water buffalo, but tractors are increasing.

Rice and sugar cane are the money-making crops. The woman (left) spreads a carpet of rice to dry on a street in Taichung, a produce distributing center. Formosan farmers also raise sweet potatoes, peanuts, bananas, pineapples, citrus fruits, vegetables, wheat, soybeans, jute, and tobacco. Most families have chickens. Horses are so scarce that children flock to see a pair in the Taipei Zoo. To the Formosans, farming means more than planting crops in the earth. They also farm forests—planting woods of Chinese fir and Australian beefwood. Ponds are used to raise milkfish, carp, and



and Confucianism

THE AUTHOR of Confucianism, faith of 300,000,000 people, never intended to start a religion. He put his emphasis on this world: the relationship of man to man.

While Lao-tzu urged harmony with nature, Confucius—shown at right in a photograph of an ancient portrait—preached harmony between people. The master never claimed to have an original thought, but drew his ideas from ancient Chinese classics. Yet his teaching set the tone of Chinese society for more than 25 centuries.

He was born about 550 B.C., a jolly fellow who liked fishing and playing the lute.

China in that day was a chaotic region of feudal lords warring against each other, overburdening the common people to pay for war and extravagance. Confucius dreamed of a world where peace and good will would replace war, hatred, and sorrow. He thought the best place to practice his theories would be in the cabinet of a lord. But when rulers offered opportunities, he snatched the chance to point out the wrongs these lords had committed—not the best tactic in a job interview.

He never won a position of authority, so he turned to teaching, hoping to influence the men who would become cabinet members. The essence of his teaching was a negative golden rule: "Never do to others what you would not like them to do to you." He taught that a king existed only for the welfare of his people, that public officials should be selected for their ability and character, and that education should be available to all who could profit by it—all ideas contrary to the time.

He taught that if harmony marked the relationships between father and son, ruler and subject, husband and wife, friend and friend, brother and brother, harmony would prevail in the state. A good husband, brother, and father would be a good citizen. A good ruler would have good subjects. Confucius wrote little if anything. The *Analects*, edited and arranged by his followers, contain the essence of his teachings.

Nearly 300 years after his death, an emperor offered sacrifices at his tomb, starting a religious cult. Later his teachings were the basis for training of government officials. Temples to honor him rose all over China, and the sage was finally made a god. The Communists have tried to suppress the teachings of both Lao-tzu and Confucius, but free Chinese everywhere still honor the ancient sages.

L.B.

HERBERT C. AND J. HENRY WHITE

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SMITHSONIAN INSTITUTION, FREER GALLERY OF ART

Taoism

IN 479 A.D. an official was buried a "typical Chinese": the writings of Confucius and Lao-tzu in his left hand, those of Buddhism in his right. Chinese do not join one faith exclusively. Many are at the same time Buddhists, Taoists and Confucianists, while still observing an ancient folk religion.

One of the major religions is Taoism, faith of some 50 million Chinese. Originally it was the philosophy of Lao-tzu, a contemporary of Confucius. Lao-tzu urged a withdrawal from civilization and a movement back to nature, a simple life among China's idyllic cliffs and streams (left).

While Western religions hold that man is the reason for the world's creation, the Chinese see man as only a part of the whole natural order. So while the Westerner turns nature to his own use, the Chinese attempts to live in harmony with it.

Very early, Chinese had noticed that the world contained order: that they could predict summer following spring and the positions of sun and moon. They also noticed disorder: floods, storms, droughts. From this philosophers tried to interpret the universe. They decided—possibly as early as 1,000 B.C.—that two forces, the *yin* and *yang*, are responsible for all that exists. *Yang* is the positive force; *yin* the negative. Acting together these two forces have brought all things into being. When these two are at odds disaster follows. When they are in harmony life is good.

Taoists say the origin of this harmony is Tao, an indefinable, mysterious force which governs the universe. Translated, Tao means "way." By extension it means "the proper way" or "the way of nature."

According to Lao-tzu, man finds peace by living in harmony with Tao. He should leave "the gold in the mountains, . . . the pearls in the sea," stop craving worldly goods and honors, love his fellow men, repay evil with good.

Taoism did not long remain the simple philosophy of Lao-tzu. Cults grew, adding Buddhist beliefs, magic, witchcraft, fortune-telling, rituals, and a group of gods—many taken from the old folk religion.

JOSEPH WESTON

ment Station at Wooster, is larger, smoother, and meatier. This luscious one weighs almost two pounds.

Today 4½ to 5 million tons of tomatoes are commercially grown in the United States. More than half of this red tide flows out of California, where agriculture is planned with a strategy befitting a wartime campaign.

In the Coachella and Imperial Valleys in southern California, farmers convert fertile land, irrigation water from the Colorado River, and hard work into an early tomato harvest. The record yield is more than 50 tons an acre, enough to make the eastern farmer green with envy. He usually can produce only 15 tons an acre.

To outwit late frosts, the Coachella Valley grower places a paper "hotcap" over each tiny plant. One type of cap is made of two pieces of wire, crisscrossed and covered with paper. This miniature tent hoards the heat and protects the plant.

By April, the danger of frost passes as temperatures rise. Now the hotcaps hold too much heat. Workers slit the caps to ventilate the plants. Others follow to dust them with insecticides, above.

As the plants mature, the caps are taken off. The plants are on their own, to blush red with tomatoes to be harvested in May or June.

Farther north around Sacramento, the harvest is later but just as bounteous. August finds roads between field and cannery clogged with huge trucks overflowing with their juicy cargo. West of Sacramento, right, fieldhands in the background pick the tomatoes, place them in crates, and pile the crates along the path big trucks have made across the field. Workers pile the truck (foreground) with tomatoes and wave the driver off to market. A.P.M.

RALPH GRAY, NATIONAL GEOGRAPHIC STAFF

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NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

THE NATION'S NO. 1 TRUCK CROP

Tomatoes

IN FOOD—as well as matters of state—Thomas Jefferson knew what he was talking about. Tomatoes, he said, were delicious.

But it took another century until most folks realized it.

In Jefferson's day the tomato had a bad name. Didn't the plant belong to the nightshade family, some of whose species are poisonous? It did—so all tomatoes were shunned just because the family possessed a few dubious relations. Some gardeners, it is true, knew it as the "love apple"; but they grew it as an ornamental plant in flower gardens.

In America the tomato really caught on as a food only after the Civil War. European chefs by then had been cooking with it for years.

Once Americans "discovered" the tomato, they made a big thing of it. Today enough people agree with Thomas Jefferson's taste to make the tomato the No. 1 truck crop of the nation.

(The expression "truck crops," incidentally, has no connection with the fact that they are commonly hauled to market in trucks. It derives from the French *troquer,* meaning to barter or exchange, and in this country became synonymous with vegetables in general because much of this produce used to be bartered or sold in small lots.)

In value, the tomato leads all other fresh vegetables taken to market. It has also become our most canned crop. Processed and seasoned, it comes to the table in the form of whole tomatoes, tomato soup, sauce, and paste, as well as tomato juice, an American innovation.

The commercial tomato crop in 1960 was valued at $250,000,000, nearly double the value of the second-place truck crop, lettuce. This doesn't include the additional tons of tomatoes that trickle in every summer from backyard garden plots.

To keep pace with demand, plant breeders have refined and diversified the tomato. In Jefferson's day, most tomatoes were small and pear-shaped. Today's strains and varieties range from the tiny currant tomato to the giant two-to-three-pound beefsteak tomato.

A new tomato like the Ohio W-R Globe (left), bred by the Ohio Agricultural Experi-

I would help round up the horses, lead them back to camp, and tie them to trees. After that long-awaited breakfast we would all saddle up and then try to put on the bridles.

On cold mornings (once we woke up in August frost) horses don't like the idea of having a chunk of cold steel pushed into their mouths. We would have to hide the bridles behind our backs, then quickly shove in the bits.

Then we'd mount up—not so easy when the horse doesn't want you aboard. If the other horses were moving out onto the trail, yours would want to follow, and when you got one foot in the stirrup, he'd take off, with you hopping along beside him on your free foot. Finally you would boost yourself high enough to swing your leg over, and away you'd go.

There was little galloping along the trail. Mostly we rode slowly along steep ridges, looking down into beautiful valleys, and across to endless ranks of snow-covered peaks—some of them not yet named.

Sometimes, as we daydreamed along, we would stir up a group of bees—then the horses would take off as if jet propelled while we hung on for dear life, our silent communion with nature disrupted by nature itself.

Once my father was riding ahead when he happened on a black

Photographs by Kathleen Revis, National Geographic Photographer

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Vacation Pack Trip Through the Cascades Wilderness

By Andy Park

FOR A CITY BOY who had never been on a western saddle before, I had come a long way.

Here I was (right) in the rugged North Cascades of Washington State, high in mountains few men have ever seen. And my horse was headed toward the most majestic sight in those mountains—mighty Glacier Peak rising above the mirror of Image Lake.

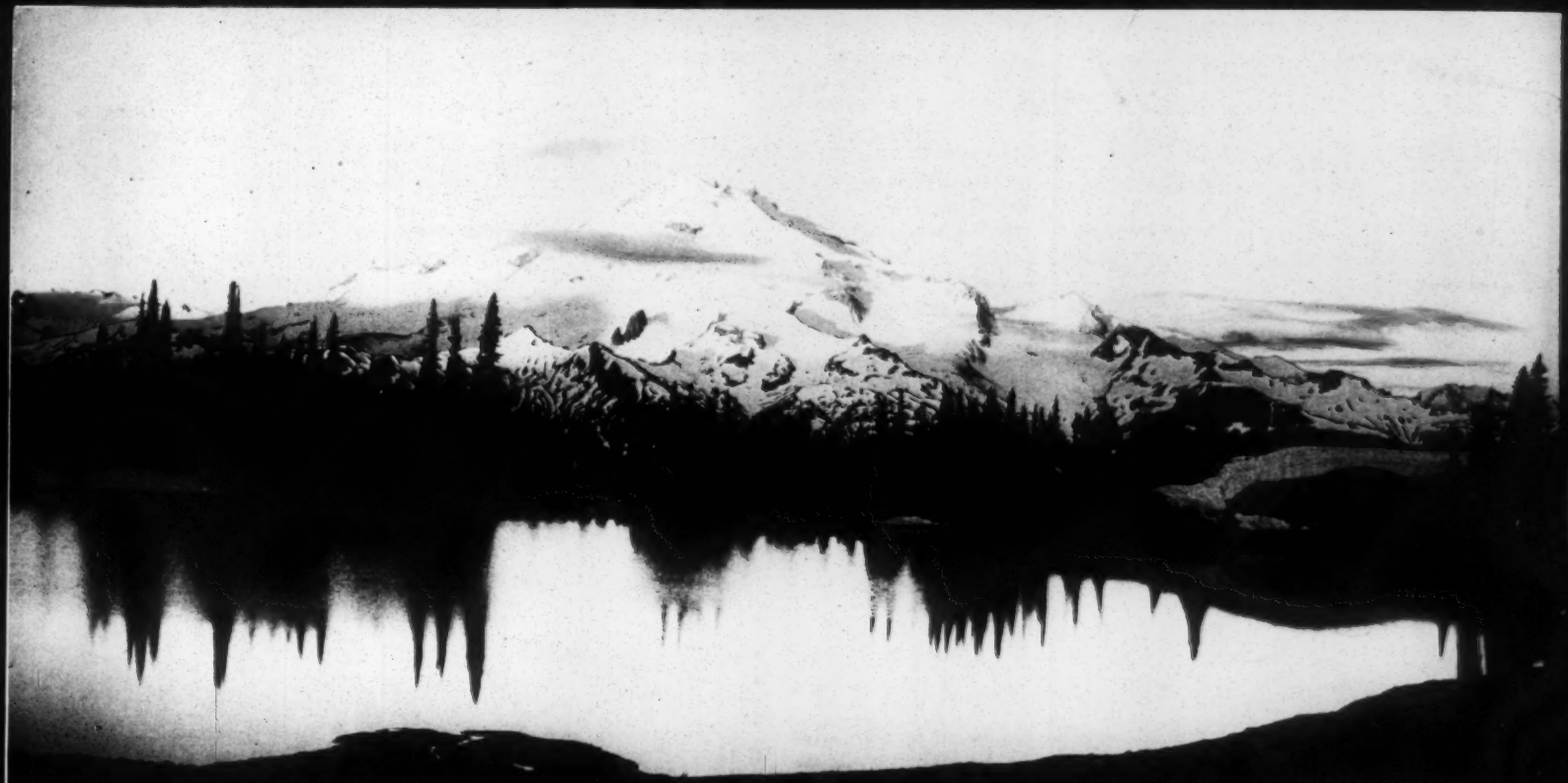
I was lucky enough to make the trip because my father, a writer for the *National Geographic*, took me along on an assignment. (See the March 1961 *Geographic*). There would be a lot of fun—and a lot of work—before we reached Image Lake. It is not easy to travel in wilderness that seems designed especially for mountain goats (left) rather than people. We went by horse and by foot (far right), and our supplies were limited to what we or our horses could tote. We had to bring our homes (tents), our beds (sleeping bags), and our grub—or most of it.

The sparkling streams, cast across the mountain slope like necklaces, did provide trout.

You not only have to be quite a fisherman to catch these beauties, you have to keep an eye on them even after you've got them landed and cleaned (a chore I'm doing at right).

One night I came back to camp with eight 15-inch cutthroat trout. Everybody admired them. Pan-fried the next morning, their aroma was so delicious that they had all disappeared inside hungry campers before I could get one for myself.

Mountain appetites are so fierce that I willingly got out of bed early each morning—a feat my mother can't believe. About 4 a.m.



bear. The horse, scared to death, took off; the bear, scared to death, took off; but my father, scared to death, hung on and managed to quiet the horse.

At camp, with fires made, tents set up, and supper demolished, I'd crawl into my sleeping bag, determined to watch for shooting stars in the clear sky—but somehow the next thing I knew it would be time to round up the horses again and get a big breakfast going.

The best awakening was beside Image Lake, where Glacier, queen peak of the Cascades, loomed above with the sunrise painting pink her white blouse of snow (above). I vowed that someday I'd come back. If the *National Geographic* ever wants a sequel to my dad's story, I'm their man.